

CLAIMS

Claim 1. (currently amended) A composition, comprising:
at least one biomolecule, wherein said biomolecule is a biomaterial; and
an electromagnetic energy absorbing species associated therewith, and wherein said electromagnetic energy absorbing species is a metal susceptor which absorbs electromagnetic energy, and wherein said electromagnetic energy absorbed is inductively applied.

Claim 2. (original) The composition of claim 1, wherein said biomolecule is associated with said electromagnetic energy absorbing species via a chemical linker.

Claim 3. (withdrawn) The composition of claim 2, wherein said chemical linker is an avidin/biotin link.

Claim 4. (original) The composition of claim 1, wherein said biomolecule is associated with said electromagnetic energy absorbing species via a chemical bond.

Claim 5. (original) The composition of claim 1, wherein said biomolecules form a dimer via a chemical bond, said dimer associated with said electromagnetic energy absorbing species via said same chemical bond or via a different chemical bond.

Claim 6. (withdrawn) The composition of claim 1, wherein said biomolecules are associated with said electromagnetic energy absorbing species via a physical process.

Claim 7. (withdrawn) The composition of claim 6, wherein the physical process is diffusion.

Claim 8. (withdrawn) The composition of claim 1, wherein the biomolecule is a protein, a carbohydrate, or a lipid or a combination thereof.

Claim 9. (currently amended) The composition of claim 1, wherein the biomolecule is a ~~pharmaceutical, a biologic, a biomaterial, or a diagnostic or a combination thereof.~~

Claim 10. (canceled)

Claim 11. (canceled)

Claim 12. (currently amended) The composition of claim ~~[[10]]~~ 1, wherein the susceptor forms a dipole.

Claim 13. (currently amended) The ~~method~~ composition of claim 1, wherein said electromagnetic energy absorbing species comprises matter with non-zero electrical conductivity.

Claim 14. (currently amended) The ~~method~~ composition of claim 13, wherein said matter is diamagnetic, paramagnetic, or ferromagnetic.

Claim 15. (currently amended) The ~~method~~ composition of claim 13, where said matter is an ionomer, a conducting polymer, an alkali metal, a transition metal, a lanthanide, or a metalloid or a combination thereof.

Claim 16. (currently amended) The ~~method~~ composition of claim 13, where said matter is ~~colloidal or non-colloidal gold, silicon, cadmium selenide, cadmium sulfide, ruthenium, indium phosphide, indium arsenide, gallium arsenide, gold maleimide, gallium phosphide, hydroxysuccinimidyl gold, nickel copper, nickel palladium, palladium cobalt, nickel silicon, stainless steel, iron oxide, ferrite, titanium, Phynox, palladium/cobalt alloys, nitinol, titanium, titanium alloys, zirconium, gadolinium, aluminum oxide, dysprosium, cobalt alloys, nickel, gold, palladium, tungsten, or alloys of materials from this group.~~

Claim 17. (currently amended) The ~~method~~ composition of claim 16, where said matter is a metal nano- or micro-particle, a semiconducting nano- or micro-particle, a magnetic nano- or micro-particles, a polystyrene encapsulated metal particle, a buckminsterfullerene, or liposome encapsulated metal particles.

Claim 18. (withdrawn) The composition of claim 1, wherein the electromagnetic energy absorbing species is a dye.

Claim 19. (currently amended) The composition of claim 1, wherein the electromagnetic energy absorbed ~~is laser-generated or is radiofrequency~~.

Claim 20. (canceled)

Claim 21. (original) The composition of claim 1, wherein the biomolecule, the electromagnetic energy absorbing species or both undergo a change in state upon application of electromagnetic energy to said composition.

Claim 22. (original) The composition of claim 21, wherein the change in state is a cleaved bond or denaturation.

Claim 23. (original) The composition of claim 1, further comprising a liposome, said composition incorporated therein.

Claim 24. (currently amended) A composition, comprising:
at least one biomolecule~~[[;]]~~, wherein said biomolecule is a biomaterial; and
a susceptor associated therewith.

Claim 25. (original) The composition of claim 24, wherein said biomolecule is associated with said susceptor via a chemical linker.

Claim 26. (withdrawn) The composition of claim 25, wherein said chemical linker is an avidin/biotin link.

Claim 27. (original) The composition of claim 24, wherein said biomolecule is associated with said susceptor via a chemical bond.

Claim 28. (original) The composition of claim 24, wherein said biomolecules form a dimer via a chemical bond, said dimer associated with said susceptor via said same chemical bond or via a different chemical bond.

Claim 29. (withdrawn) The composition of claim 24, wherein said biomolecules are associated with said susceptor via a physical process.

Claim 30. (withdrawn) The composition of claim 29, wherein the physical process is diffusion.

Claim 31. (withdrawn) The composition of claim 24, wherein the biomolecule is a protein, a carbohydrate, or a lipid or a combination thereof.

Claim 32. (currently amended) The composition of claim 24, wherein the biomolecule is ~~a pharmaceutical, a biologic, a biomaterial, or a diagnostic or a combination thereof.~~ a biomaterial, or a diagnostic or a combination thereof.

Claim 33. (original) The composition of claim 24, where said susceptor is a metal, a metal nano- or micro-particle, a semiconducting nano- or micro-particle, a magnetic nano- or micro-particles, a polystyrene encapsulated metal particle, a buckminsterfullerene, or liposome encapsulated metal particles.

Claim 34. (currently amended) The composition of claim 33, wherein the metal is ~~colloidal or non-colloidal gold, silicon, cadmium selenide, cadmium sulfide, ruthenium, indium phosphide, indium arsenide, gallium arsenide, gold maleimide, gallium phosphide, hydroxysuccinimidyl gold, nickel copper, nickel palladium, palladium cobalt, nickel silicon,~~

~~stainless steel, iron oxide, ferrite, titanium, Phynox, palladium/cobalt alloys, nitinol, titanium, titanium alloys, zirconium, gadolinium, aluminum oxide, dysprosium, cobalt alloys, nickel, gold, palladium, or tungsten or alloys thereof.~~

Claim 35. (original) The composition of claim 24, wherein the susceptor forms a dipole.

Claim 36. (original) The composition of claim 24, wherein the biomolecule, the electromagnetic energy absorbing species or both undergo a change in state upon application of electromagnetic energy to said composition.

Claim 37. (original) The composition of claim 36, wherein the change in state is a cleaved bond or denaturation.

Claim 38. (original) The composition of claim 24, wherein said biomolecule(s) comprise at least one protein, said composition further comprising a liposome wherein said protein(s) and said susceptor are incorporated therein.

Claim 39. (original) The composition of claim 38, further comprising a pharmaceutical incorporated into said liposome.

Claim 40. (withdrawn) A method for increasing the energy of biomolecules comprising the steps of

associating the biomolecules with an energy absorbing substance to form the composition of claim 1; and,

applying electromagnetic energy to said composition wherein the electromagnetic energy absorbed by said absorbing species is transferred to said biomolecules thereby increasing the energy thereof.

Claim 41. (withdrawn) The method of claim 40, further comprising:
accelerating a biochemical reaction having said biomolecules as reactants via said increase in energy.

Claim 42. (withdrawn) The method of claim 41, wherein said biochemical reaction results in a conformational change in said biomolecules.

Claim 43. (withdrawn) The method of claim 42, wherein said conformational change is denaturation.

Claim 44. (withdrawn) The method of claim 42, wherein said biochemical reaction is enzyme catalyzed.

Claim 45. (withdrawn) The method of claim 44, wherein said biochemical reaction is a polymerase chain reaction or an enzyme-linked immunosorbent assay.

Claim 46. (withdrawn) The method of claim 40, wherein said biomolecules are in tissue or are *in vitro*.

Claim 47. (withdrawn) The method of claim 40, wherein said electromagnetic energy is radiofrequency

Claim 48. (withdrawn) The method of claim 40, wherein said electromagnetic energy has a frequency from about 100 kHz to 40 GHz.

Claim 49. (withdrawn) The method of claim 48, wherein said electromagnetic energy has a frequency from about 100 kHz to 10 GHz.

Claim 50. (withdrawn) The method of claim 40, wherein said electromagnetic energy generates a magnetic field.